

SERVICE AGREEMENT
between
THE NORTH CAROLINA HOUSING FINANCE AGENCY,
CITY OF DURHAM, and
NORTH CAROLINA ADVANCED ENERGY CORPORATION

THIS SERVICE AGREEMENT (this "Agreement") is made and entered into as of the 15 day of November 2013 (the "Effective Date"), by and between NORTH CAROLINA ADVANCED ENERGY CORPORATION ("AE"), a North Carolina nonprofit corporation, whose address is 909 Capability Drive, Suite 2100, Raleigh, NC 27606-3870, the NORTH CAROLINA HOUSING FINANCE AGENCY ("NCHFA" or the "Agency") whose address is 3508 Bush Street, Raleigh, NC 27609, and the City of Durham ("CPLP Member"), whose address is 101 City Hall Plaza, Durham, NC 27701.

RECITALS

WHEREAS, NCHFA has established a "Community Partners Loan Pool" Program (the "Program") which provides funding to help low-to-moderate income households achieve home ownership through subordinate mortgage financing to the home buyers and the local housing organizations that assist them; and

WHEREAS, the CPLP Members are selected to participate in the Program through a formal application process; and

WHEREAS, NCHFA has developed Program guidelines ("Guidelines") for the administration of the Program, which are incorporated herein by reference and made a part hereof; and

WHEREAS, the CPLP Member participates in the Program to provide services that assist eligible households in meeting the Program objectives; and

WHEREAS, one objective of the Program is to improve the availability of homes to low and moderate income households, which are energy-efficient, durable and environmentally safe; and

WHEREAS, AE provides certain professional services related to energy efficiency; and

WHEREAS, CPLP Members and NCHFA, wish to procure certain professional services and deliverables from AE for the purposes stated herein.

NOW, THEREFORE, in consideration of the mutual promises and benefits contained herein, including the fees listed in this Agreement the parties, wishing to be legally bound, hereby agree as follows:

ARTICLE 1
SERVICES

- A. AE agrees to perform certain plan and specification review, training, inspections, performance testing and to provide certification and guarantees, as more completely described in Appendix A, which is attached hereto and incorporated herein by reference (hereinafter "Services").
- B. The CPLP Member agrees to:
1. Reserve Program funds for eligible home buyers and eligible homes with NCHFA in accordance with Program Guidelines in a format required by the Agency;
 2. Submit to AE for its review house plans, specifications, and other attachments as needed for each residence at least three (3) weeks prior to ordering materials and setting specifications;
 3. Make any necessary design changes that may be required by AE;
 4. Ensure its builders and contractors attend SystemVision training;
 5. Set specifications, order materials, and build in accordance with the SystemVision Program Standards and AE reviewed and approved plans;
 6. Schedule framing, insulation, and final site visits via the SystemVision Scheduling Hotline with at least three (3) business days notice;
 7. Permit AE access to homes being constructed under the Program for inspections and performance testing;
 8. When CPLP Member is not the builder/general contractor, enter into a written agreement with the builder/general contractor specifying the mechanism by which the builder/general contractor will be compensated for SystemVision upgrades that exceed building code standards;
 9. Request Program funds from the Agency when the construction of a home is completed, as verified by the Certificate of Occupancy and/or inspection; and
 10. Pay AE the compensation identified in Appendix B for the Services AE provides. The CPLP Member understands that it is required to pay AE for any Services provided in connection with this Agreement regardless of whether the CPLP Member has received funding from NCHFA.
- C. NCHFA agrees to:
1. Receive and review Program requests for fund reservations submitted by the CPLP Member;
 2. Notify the CPLP Member if the reservation request for Program funds is approved or denied and of the date of expiration of the reservation;
 3. Notify the CPLP Member and AE in the event that Program funding is temporarily or permanently unavailable;
 4. Notify the CPLP Member when any previously approved reservation of Program funds expires;

5. Pay a fee from Program funds in the total amount of up to \$4,000 per unit to compensate the CPLP Member after each unit is approved by AE and NCHFA has received and approved the payment request from the CPLP Member.

ARTICLE 2

COMPENSATION

- A. NCHFA agrees to pay the CPLP Member up to \$4,000 as a subsidy for costs incurred to attain SystemVision certification. The SystemVision subsidy schedule is governed by the Program Guidelines.
- B. For the Services provided by AE, the CPLP Member agrees that AE shall be paid according to the payment schedule set forth in Appendix B, which is attached hereto and incorporated herein by reference.

If the CPLP Member does not reserve Program funds with the Agency or if the Agency does not approve a homebuyer submitted by the CPLP Member, the CPLP Member will not be eligible to receive Program funds for that homebuyer. However, the CPLP Member is still required to pay AE for the services it provides on the applicable housing unit. The CPLP Member, however, may substitute a qualified homebuyer for the denied or disapproved homebuyer, and the Agency will provide Program funds for the applicable housing unit if funds are still available.

ARTICLE 3

TERM

This Agreement shall be for an initial two-year term from the Effective Date through January 1, 2015, unless earlier terminated as provided herein.

ARTICLE 4

CONFIDENTIALITY

Section 4.1 **Confidentiality**

(a) During the course of performance of the Services, the CPLP Member, NCHFA and AE may gain knowledge of information or data of a proprietary or confidential nature belonging to the other parties (hereinafter referred to as the "Confidential Information"). All parties acknowledge and agree neither to divulge nor discuss any such Confidential Information to any third parties without the express written consent of the disclosing party, nor to use such information for any purpose not connected with the Services or the housing that receives the Services covered hereby.

(b) In order to be considered Confidential Information, such information must be conspicuously labeled "Confidential" or "Proprietary Information: Do Not Disclose" or in some

other matter to alert the receiving party that the information is intended to be confidential or is proprietary and should not be disclosed. It is understood and agreed that the Program Standards, the revisions AE makes to plans and specifications and the Contractor and Sub-Contractor Training shall not be considered Confidential Information.

(c) The obligations set forth in subparagraph (a) above shall not extend to any portion of Confidential Information:

- (i) that is known to the receiving party prior to disclosure or is information generally available to the public;
- (ii) that was not acquired, at any time, directly or indirectly and /or in any manner, from the party owning the Confidential Information and which the receiving party lawfully had in its possession prior to the Effective Date;
- (iii) that hereafter, through no act on the part of the receiving party, becomes information generally available to the public; or
- (iv) that corresponds in substance to information furnished to the receiving party on a non-confidential basis by any third party having a legal right to do so.

ARTICLE 5

REPRESENTATIONS, WARRANTIES, AND

COVENANTS OF AE

Section 5.1 **Performance Standards**

AE shall perform the Services with care, skill, timeliness and diligence, in accordance with the applicable professional standards currently recognized by the profession, and shall be responsible for the professional quality, technical accuracy, completeness and coordination of all forms, services, reports or other items required by AE under this Agreement. AE represents and warrants that it has the experience, capability and resources, including but not limited to sufficient personnel and supervisors, to efficiently and expeditiously perform the Services to be provided hereunder in accordance with the highest professional standards, and AE further represents and warrants that it will at all times devote the necessary personnel and supervisors to perform the Services hereunder in such a manner. In the event that AE breaches a representation or warranty set forth in this paragraph 5(a), AE's sole liability and CPLP Member's sole remedy shall be that AE shall re-perform the Services, at its cost, in a manner consistent with this paragraph.

Section 5.2 **Compliance with Laws**

(a) During the term of this Agreement, each party and all of its employees, subcontractors, agents, representatives and invitees shall fully comply with all applicable laws, governmental regulations, rules, requirements, ordinances, and other requirements of local and state authorities and the Federal government in connection with the Services hereunder.

(b) AE is solely responsible for the safe transportation, use, storage, and disposal of any chemicals, tools, equipment and other materials used by AE in full compliance with all applicable laws.

ARTICLE 6

LIMITATION OF LIABILITY

Section 6.1 **Limitation of Liability**

IN NO EVENT SHALL AE BE LIABLE IN THE AGGREGATE FOR ANY CLAIM OR DAMAGES RELATED TO, OR AS A RESULT OF, THIS AGREEMENT EXCEEDING THE TOTAL AMOUNT PAID TO AE HEREUNDER DURING THE THREE (3) MONTH PERIOD IMMEDIATELY PRECEDING THE DATE ON WHICH THE CLAIM AROSE. IN ADDITION, IN NO EVENT SHALL AE BE LIABLE FOR SPECIAL, INDIRECT, CONSEQUENTIAL, EXEMPLARY, OR INCIDENTAL DAMAGES RELATED TO, OR AS A RESULT OF, THIS AGREEMENT INCLUDING LOSS OF PROFITS.

ARTICLE 7

TERMINATION

Section 7.1 **Termination for Breach**

Any party may terminate this Agreement in the event of breach of a material obligation of the other if such breach remains uncured thirty (30) days after receipt of written notice.

Section 7.2 **Termination for other than Breach**

Any Party shall have the absolute and unconditional right, in its sole judgment and discretion, to terminate this Agreement for any reason, with or without cause, by notice to the other party such termination to be effective thirty (30) days following the date written notice is given.

Section 7.3 **Effect of Termination / Minimize Costs**

In the event of termination for other than breach, notwithstanding the termination this Agreement shall continue in full force and effect as to any housing which is "in progress" (that is which AE has already performed House Plan and Specification Review) until AE provides the Services with respect to such housing. AE shall be compensated by the CPLP Member for such

houses "in progress" as set out in Attachment B. In all events, Articles 4, 5, 6, 7 and 8 shall survive termination or expiration of this Agreement.

ARTICLE 8

MISCELLANEOUS

Section 8.1 **Record Retention**

Records shall not be destroyed, purged or disposed of without the express written consent of NCHFA. Federal and State records retention policy requires all records obtained or made pursuant to this Agreement to be retained for a minimum of five years or until all audit exceptions have been resolved, whichever is longer. Also, if any litigation, claim, negotiation, audit or other action involving this Agreement has been started before expiration of the five-year retention period described above, the records must be retained until completion of the action and resolution of all issues which arise from it, or until the end of the regular five-year period described above, whoever is later.

Section 8.2 **Governing Law**

This Agreement will be governed by the laws of the State of North Carolina without regard to its conflicts of law provisions. Each party expressly consents to the jurisdiction of the courts of the State of North Carolina.

Section 8.3 **Permits**

AE shall obtain and pay for all permits, governmental fees, and licenses necessary for the performance of the Services to be provided hereunder and shall obtain all required inspections, authorizations and approvals prior to commencement of the Services hereunder.

Section 8.4 **Independent Contractor**

(a) AE shall perform this Agreement solely as an independent contractor, and as such will select, engage and discharge its employees and otherwise direct and control the performance of the Services. Neither AE nor anyone employed by it shall be, represent, act, or purport to act as, or be deemed to be, the agent, representative, employee, or servant of NCHFA or the CPLP Member nor shall AE nor anyone employed by it be, represent, act, or purport to act as, or be deemed to be, the agent, representative, employee, or servant of AE.

(b) Neither NCHFA, the CPLP Member nor AE have authority to make any statement, representation, or commitment of any kind or to take any action that is binding upon another party hereto without the other party's prior written authorization.

Section 8.5 **Notices**

(a) All notices hereunder shall be delivered (i) personally, (ii) by registered or certified mail, postage prepaid, return receipt requested or (iii) by overnight courier service to the following addresses of the respective parties:

If to AE: North Carolina Advanced Energy Corporation
909 Capability Drive
Suite 2100
Raleigh, NC 27606-3870
Attn: Robert Koger

If to NCHFA: North Carolina Housing Finance Agency
P.O. Box 28066
Raleigh, NC 27611-8066
Attn: C. William Dowse

If to CPLP Member: City of Durham
101 City Hall Plaza
Durham, NC 27701
Attn: Reginald J. Johnson

(b) Notices shall be effective upon receipt. A party may change its address listed above by notice to the other parties.

Section 8.6 **Force Majeure**

Any delay in the performance of any of the duties or obligations of a party hereto (except the payment of money owed) shall not be considered a breach of this Agreement and the time required for performance shall be extended for a period equal to the period of such delay, provided that such delay has been caused by or is the result of any acts of God; acts of the public enemy; insurrections; riots; embargoes, labor disputes, including strikes, lockouts, job actions, or boycotts; fires; explosions; or floods. The party so affected shall give prompt notice to the other parties of such cause and shall take whatever reasonable steps are necessary to relieve the effect of such cause as rapidly as possible.

Section 8.7 **Audit**

All parties agree that any and all records associated with this Agreement must be retained for a period of five years from the date this Agreement is terminated and accessible to the North Carolina State Auditor's Office in accordance with N.C.G.S. 147.64.7(4).

Section 8.8 **Headings**

The headings of the Articles and Sections of this Agreement are intended solely for convenience and shall not be deemed to constitute part of this Agreement or to affect the construction or interpretation hereof.

Section 8.9 **Severability**

In case any one or more of the provisions of this Agreement should be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

Section 8.10 **Assignment**

This Agreement shall bind the parties and their successors and permitted assigns. Neither party may assign this Agreement without the prior written consent of the other. The term "assignment" shall include any transfer by merger, acquisition, stock transfer or other consolidation with another entity. Any assignment attempted without the written consent of the other parties shall be void.

Section 8.11 **Survivorship**

All rights to payment accrued hereunder that have not been previously paid in full by the recipient for services performed in Appendix A will survive the termination of this Agreement and remain binding upon and for the benefit of the parties hereto.

Section 8.12 **Attachments**

Any attachment, appendix or exhibit to this Agreement is hereby incorporated into and made a part of this Agreement. In the event of a conflict between the provisions contained in the body of this Agreement and any such attachment, appendix or exhibit, the terms in the body of this Agreement shall control.

Section 8.13 **Waiver; Modification of Agreement**

No waiver, amendment, or modification of any of the terms of this Agreement shall be valid unless in writing and signed by authorized representatives of all parties hereto. Failure by a party to enforce any rights under this Agreement shall not be construed as a waiver of such rights nor shall a waiver by a party in one or more instances be construed as constituting a continuing waiver or as a waiver in other instances.

Section 8.14 **Entire Agreement**

This Agreement constitutes the entire agreement between the parties concerning the subject matter hereof and supersedes all written or oral prior agreements or understandings with respect thereto. No course of dealing or usage of trade shall be used to modify the terms hereof.

Section 8.15 **Counterparts**

This Agreement may be executed in one or more counterparts, each of which shall for all purposes be deemed to be an original and all of which shall constitute the same instrument.

[The remainder of this page is intentionally left blank.]

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized officers as of the day and year first above written.

ATTEST:

CITY OF DURHAM

preaudit certificate, if applicable _____

NORTH CAROLINA
ADVANCED ENERGY CORPORATION

By: Robert K. Koger
Robert K. Koger, President

NORTH CAROLINA
HOUSING FINANCE AGENCY

By: C. William Dowse
C. William Dowse, Director of Strategic Investment

APPENDIX A

SERVICES PROVIDED BY AE

AE agrees to provide the Services described below to CPLP Members. All such Services shall be provided in strict accordance with the terms and conditions of the Agreement to which this Appendix A is attached. NCHFA shall initiate the review process for any particular recipient by written authorization to AE.

1. House Plan and Specification Review. Within fourteen (14) business days of AE's receipt of plans, specifications and the completed AE Plan Review Input Form from the CPLP Member detailing the housing which a CPLP Member proposes to construct, AE shall review such plans and specifications and shall make modifications to such plans and revise the specifications as necessary so that the housing will meet the Program Standards attached hereto as Exhibit 1. AE shall provide the CPLP Member with documentation of necessary revisions to the plans and specifications. Upon request, AE will provide a non-binding good faith estimate of the additional cost required to construct a house in compliance with the Program Standards.

2. Construction Manager, Contractor, Sub-Contractor and Housing Counselor Training. If the CPLP Member decides to go forward with the Program, AE will provide reasonable training of CPLP Member, its construction manager and sub-contractors as necessary to ensure that the contractors and sub-contractors understand the revised plans and specifications, Program Standards and the construction techniques for achieving the Program Standards. AE will instruct the housing counselors identified by the CPLP Member so that such housing counselors can instruct the Original Homeowner (as defined in the Guaranty) in the Homeowner Responsibilities applicable to the Guaranty. It is anticipated that (i) the training of the general contractor, the housing counselors and the employees/executive directors of the CPLP Member shall be primarily classroom training, (ii) the HVAC contractor shall receive both classroom and on-site training and (iii) the insulation contractor will receive on-site training; however AE shall use its professional judgment to ensure that all parties are appropriately trained.

3. On-site Quality Control. During the course of construction of the housing by CPLP Member, AE will make sufficient visits to the site(s) to (i) inspect the work being done by the CPLP Member, its construction manager and subcontractors, to assure it is being done in a way to meet Program Standards and (ii) to assist the construction manager and subcontractors in meeting the Program Standards. AE shall not be obligated to inspect or test each house constructed by the CPLP Member. On houses that are inspected, there will be three inspections. One shall occur after the framing, one shall occur after the insulation and one after the house is completed. If the house fails an inspection, and the home must be re-inspected, the CPLP Member will be obligated to pay a \$50 fee for the initial re-inspection and \$150 per hour, including travel time to and from the site, for any additional re-inspections thereafter.

4. Performance Testing. AE shall implement a performance-testing and certification program. This program will lead to the AE Comfort and Energy Use Guaranty. AE shall perform tests on as many homes as it deems necessary to provide the certifications and guarantees. While any home may be tested, every home may not be tested.

As part of the certification process, HVAC subcontractors shall be required to submit to AE written documentation that all heating, air conditioning, and ventilation equipment has been installed in accordance with manufacturers' specifications and Program Standards. AE will provide them a form for this purpose. If, through testing and inspections ("Performance Testing"), AE determines that equipment has been installed contrary to manufacturers' specifications or Program Standards, the HVAC contractor shall, at its expense, make all necessary repairs as necessary in order for the equipment to meet the manufacturers' specifications and the Program Standards. If there is disagreement between AE and the contractor about whether or not manufacturers' specs have been met, a technical representative of the manufacturer shall be called in to make the final determination.

After a house fails the Performance Testing for the first time, AE will, at its discretion,

- i. work with the CPLP Member and/or appropriate subcontractors to bring the house up to standards; or
- ii. bring the house up to program standards itself; or
- iii. refuse to certify the house due to non-cooperation of third parties. It is understood that this option is a last resort, and will only be used after substantial efforts by AE have been made to resolve the issues, and only after NCHFA has been given an opportunity to resolve the issues by working with CPLP Member and the appropriate subcontractor.

AE will make reasonable efforts to work with the CPLP Member and/or appropriate subcontractors to help them bring the house up to Program Standards. In the event that these efforts are unsuccessful, AE may decide to make the necessary alterations to the house, with the permission of the CPLP Member. If this happens and AE invoices the CPLP Member for the cost of the work, NCHFA may, at its discretion, increase the size of the grant to the CPLP Member to cover those costs.

If a house does not pass Performance Testing the second time due to failure of the CPLP Member or its contractors to follow AE's directions, AE shall have no further responsibility under this Agreement as to such house unless the CPLP Member and/or contractor agree to pay AE for cost of any future supervision and/or Performance Testing. Then, AE will continue to work with the CPLP Member and/or contractor until such house passes Performance Testing.

5. Certification and Guaranty. Once AE has successfully completed the performance testing for a particular house or subset of houses built by a CPLP Member, AE will certify to CPLP Member and NCHFA (the "AE Certification") that the house (s) constructed by the CPLP Member meets the Program Standards and AE will issue a Comfort and Energy Use Guaranty (the "Guaranty") for such house. A specific house does not need to be tested by AE in order for

AE to provide a certification for such house. The Guaranty shall extend for two (2) years and may be enforced by the original owner/occupant of the house. The Guaranty shall either be in the form attached hereto as Exhibit 2, depending on the construction methods used.

APPENDIX B

COMPENSATION PROVIDED TO AE BY CPLP MEMBER

AE will be compensated for the performance of all Services described in Appendix A as follows:

CPLP Member will pay AE \$1,050 per house for providing all of the Services listed in Appendix A to such house. Payment will be due and payable upon completion of all the Services as to any such house (except that the Energy Star Certification, if applicable, need only have been applied for and not actually received). Full payment is due even if a house fails Performance Testing and AE refuses to re-certify the house due to non-cooperation of third parties, or a house fails Performance Testing on two successive occasions. Payment will be made within 30 days of AE invoicing CPLP Member.

If after the AE's initial House Plan and Specification Review, and AE's informing CPLP Member and NCHFA informing Recipient of the measures and non-binding estimated extra cost for the house to comply with the Program Standards, (i) CPLP Member decides not to pursue obtaining further Program funds from NCHFA for the materials, labor and equipment necessary to upgrade the house as originally planned to meet the Program Requirements or (ii) NCHFA decides not to fund CPLP Member for the costs for the materials, labor and equipment necessary to upgrade the house as originally planned to meet the Program Requirements then AE will be paid \$250.00 instead of the normal \$1,050.00 fee within 30 days of AE's invoice and AE will have no further obligation to render the remaining Services for such house. In such event, AE shall use commercially reasonable efforts to invoice CPLP Member for the House Plan and Specification Review after it has been notified by the CPLP Member or NCHFA that the house so inspected is not receiving additional Program funds from NCHFA.

For any home that does not pass a given inspection, CPLP Member will be charged a flat rate of \$50 for the initial re-inspection and all re-inspections thereafter will be charged at a rate of \$150 per hour, including travel time to and from the site if additional inspections may be required due to non-compliance with Standards. Payment will be due and payable upon completion of all the Services as to any such house. Full payment is due even if a house fails Performance Testing and AE refuses to re-certify the house due to non-cooperation of third parties, or a house fails Performance Testing on two successive occasions. Payment must be made within thirty (30) days of AE invoicing SystemVision Partner.

Exhibit 1
Affordable Housing with *SystemVision*™

Program Standards

1. Air Tightness

- 1.1. There shall be a continuous, durable air barrier enclosing the conditioned space. This includes features such as chases, knee walls, soffits, garage interfaces, intersecting walls, tubs and showers and dropped ceilings. Also, sheetrock shall be sealed to top plate at all attic/wall interfaces using caulk, foam, or equivalent material.
- 1.2. Tightness shall be less than or equal to .30 CFM50 per square foot of conditioned envelope area. Among other areas, this will require attention to air sealing the sub-floor to bottom plate; holes under tubs; window and door rough openings; attic hatches and electrical, plumbing and mechanical penetrations.

2. Ventilation and Moisture Management

- 2.1. There must be a filtered whole-house mechanical fresh air ventilation system.
- 2.2. All bathrooms shall have a fan vented to the outside that exhausts 20 CFM continuously or 50 CFM intermittently. (For intermittent, requires a minimum fan rating of 70 CFM).
- 2.3. All kitchens shall have a fan vented to the outside that exhausts 100 CFM. (requires a minimum fan rating of 120 CFM)
- 2.4. All ventilation ducts in unconditioned spaces, excluding kitchen exhaust ducts, shall be insulated.
- 2.5. All ventilation ducts shall terminate at or beyond the exterior skin of the building.
- 2.6. All crawlspaces shall be closed in accordance with www.crawlspaces.org.

3. Insulation and Windows

- 3.1. Insulation shall be installed to manufacturer's specifications, with no substantial gaps, voids, compression or wind intrusion. Insulation and the air barrier shall be installed in physical contact with each other.
- 3.2. Insulation levels shall, at minimum, equal those required by the 2009 IECC.
- 3.3. Raised heel trusses, or equivalent, shall be used to ensure full insulation value over the top plate of the exterior wall.
- 3.4. Wall framing techniques that reduce thermal bridging shall be used. Acceptable options include:

Continuous rigid insulation sheathing (\geq R-3 in Climate Zones 1-4, \geq R-5 in Climate Zones 5-8); or
Structural Insulated Panels (SIPs); or

Insulated Concrete Forms (ICFs); or
Advanced framing including all of the below:

Corners insulated $\geq R-6$,

Header assemblies above windows and doors $\geq R-6$ in CZ 1-4 or $\geq R-8$ in CZ 5-8,

Framing limited at windows and doors to that which is structurally necessary,

Continuous insulation behind interior/exterior wall intersections using ladder blocking or a single partition stud,

In general, exterior wall framing limited to that which is structurally necessary.

- 3.5. Windows and glass doors shall have an overall solar heat gain so-efficient (SHGC) of .30 or less and an overall U-value of .35 or less.
- 3.6. Homes in Climate Zones 1-4 with more than 10 linear feet of ductwork in the attic shall have a radiant barrier in the attic.

4. HVAC Sizing and Installation

- 4.1. Heat pumps shall have a minimum SEER rating of 14 and a minimum HSPF of 8.2.
- 4.2. Heat pumps shall have an outdoor thermostat installed to prevent supplementary heater operation when the heat pump is capable of meeting the load.
- 4.3. Furnaces shall be 90% efficient and their cooling systems shall have a minimum SEER rating of 13.
- 4.4. All duct connections shall be sealed with a UL listed "bucket" mastic product.
- 4.5. Duct leakage, measured in cubic feet per minute at 25 pascals, shall not exceed 3% of the conditioned square footage.
- 4.6. Mechanical systems shall be sized to within $\frac{1}{2}$ ton of the ACCA Manual J. ACCA Manual J room-by-room load calculations, including all inputs, shall be submitted for each plan to verify sizing.
- 4.7. The measured airflow for each room shall be within $\pm 10\%$ of the ACCA Manual J calculation.
- 4.8. Refrigerant charge shall be installed per manufacturer's specifications.
- 4.9. Inert gas (nitrogen) shall be used during any brazing/soldering of refrigerant lines.
- 4.10. Indoor and outdoor system components shall be "matched" according to the Air Conditioning and Refrigeration Institute (ARI) directory.

5. Pressure Balancing

- 5.1. All rooms within the conditioned space – except baths and laundry – shall not exceed ± 3 pascals pressure differential with respect to the outside when interior doors are closed and the air handler is operating. Returns, transfer grilles or jump ducts shall be used to balance each room in addition to door undercuts.

6. Energy Star and Appliances

- 6.1. Home shall have an Energy Star® labeled refrigerator, dishwasher or clothes washer if any is supplied to the home.
- 6.2. Home shall not have any incandescent lights.
- 6.3. Recessed lights, if used, shall be air tight and insulation contact (IC) rated.
- 6.4. Electric water heaters shall have an energy factor (EF) or at least .93. Gas water heaters shall have an energy factor (EF) of at least .61.
- 6.5. From the water heater, the first three feet of hot and cold pipes shall be insulated to $\geq R-4$.
- 6.6. Toilets shall be 1.3 GPF or less. Showerheads shall be 2.25 GPM or less. Kitchen faucets shall be 2.2 GPM or less. Bath faucets shall be 1.5 GPM or less.

7. Combustion Safety

- 7.1. Any combustion appliance inside the conditioned space, other than gas ranges and wood fireplaces, must be direct vent or power vented. Vent free gas logs are not allowed.
- 7.2. One hard-wired carbon monoxide (CO) detector shall be installed per 1,000 sq. feet of living space in homes which have any combustion appliance within the conditioned space or which have an attached garage. (minimum 1 per floor)

Exhibit 2

AE Comfort and Energy Use Guaranty

Affordable Housing with SystemVision™



Comfort and Energy Use Guarantee

ENERGY USE GUARANTEE:

Advanced Energy guarantees to the original homeowner for the two-year period after the original homeowner purchases the home, that the energy required to heat and cool the building will not exceed the Guaranteed Usage. Guaranteed Usage will be adjusted based on changes in energy rates and in the event of unusual weather conditions for the locale of the property. Should the Actual Usage for heating and cooling exceed the Guaranteed Usage in any one-year period, Advanced Energy will reimburse the Homeowner for 100% of the cost of the difference. The Guarantee will begin on the first day of the second month after closing.

COMFORT GUARANTEE:

Advanced Energy guarantees the comfort of the original homeowner for two years. Comfort is defined as a temperature differential of no greater than plus or minus 3 degrees F from the thermostat location to the center of any conditioned room within the zone. Should a comfort question arise, an Advanced Energy agent will evaluate the situation. Advanced Energy's responsibility will be limited to repairing any defects in the building's original envelope.

HOMEOWNER RESPONSIBILITIES:

In order to maintain this guarantee, the Homeowner agrees to:

1. Prudent use of windows and doors when HVAC system is in operation.
2. Operate and service heating, cooling, and ventilation (HVAC) systems as recommended by the manufacturer. Change HVAC and ventilation filters according to manufacturer recommendations.
3. Maintain thermostat settings no higher than 72 degrees F during the heating season and no lower than 76 degrees F during the cooling season.
4. Apprise Advanced Energy of any alterations or modifications to the property, facilities, equipment or occupancy that affect energy consumption so that appropriate adjustments can be made to the Guaranteed Usage. An additional fee will be required to evaluate or modify the Guaranteed Usage.
5. Submit a completed Guarantee Registration card within 30 days of occupancy to Advanced Energy to activate the guarantee.
6. Submit any claims in writing with copies of monthly energy billing information to Advanced Energy within 30 days of the end of each annual period of the guarantee. Send to Advanced Energy, Guarantee Dept., 909 Capability Drive, Suite 2100, Raleigh, NC 27606.

ANNUAL ACCOUNT ANALYSIS:

Upon receipt of claim with energy billing information, Advanced Energy will prepare and return to the homeowner an account analysis showing any reimbursement the homeowner may be entitled to according to the guarantee. At its discretion Advanced Energy agents may inspect, meter or make repairs as necessary to lower the energy requirements for heating and cooling in the future. Heating and Cooling usage will be calculated by the following method: 1) The Base Load will be the average energy used for the three lowest months of full occupancy, multiplied times twelve; 2) Adjustments will be made for exceptional energy loads such as pools and hot tubs, 3) The total annual bill minus the annual base load minus adjustments = the heating and cooling bill.

LIMITATIONS:

Advanced Energy shall not be liable for any incidental or consequential damages resulting from breach of this Energy Use Guarantee other than expressly stated above, or any express or implied guarantee arising under state law. Guaranteed Usage will be adjusted based on changes in energy rates and in the event of unusual weather conditions for the locale of the property. The Advanced Energy Use Guarantee will not apply if excessive energy use results from the malfunction of heating, ventilation, and cooling equipment or failure of the Homeowner to fulfill any or all Homeowner Responsibilities. The Homeowner understands that Advanced Energy makes no warranties which extend beyond the warranty described hereof, including any express or implied warranties of merchantability or fitness for purpose. Without limiting the general disclaimers above, Advanced Energy makes no representations or warranties of any kind, express or implied, to anyone with respect to indoor Radon and Air Quality concerns.